

Update on the Treatment of “Free” Digital Products

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UNECE Group of Experts on National Accounts
Virtual Meeting
May 18, 2021

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Background



- March 2020
 - Issue paper on data, free assets, and free services
- June 2020
 - GN on recording and valuation of data as an asset
 - Way forward for “free” products
- November 2020: Two GNs for “free” products
 - Clarification of current SNA treatment
 - Proposal for an SNA satellite account

} No changes to SNA
central framework
- April 2021: OECD update paper on data as an asset

Intersection of “Free” Products and Data



- Focus on digital platforms and digital apps
- OECD update on recording and measuring data
 - Paper by van de Ven, Zwijnenburg, Mitchell (2021)
 - Distinguishes recording and processing (R&P) costs from OP procurement (OP-P) costs
 - OP-P costs may be either produced or non-produced
 - Access to OPs
 - Exchanged for “free” services
 - Exchanged for explicit payment
 - By-product of production

- Draft by Reinsdorf and Ribarsky (2021)
- Digital platforms supply “free” products that facilitate the interaction of two or more parties
 - Subsidized side (e.g., households)
 - Funder side (e.g., advertisers)
- Funder pays markup to cover cost of “free” products
 - Funder side recovers the cost in its sales
 - Subsidized side indirectly pays for use of “free” products
- Consistent treatment for all bundled products

Current Treatment: Baseline



		<u>Household</u>		<u>Intermediary</u>		<u>Advertiser</u>		<u>Total Economy</u>	
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output		485				300		785
	Predictive ad services		275						275
	Software (platform asset)		150						150
	Software (database asset)		60						60
	Advertised product						300		300
	Intermediate consumption		0			275		275	
	Predictive ad services					275		275	
Value-added			485				25		510
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Use of Income Account	Disposable income		225		260		25		510
	Final consumption expenditure	300		0		0		300	
	Advertised product	300						300	
	Saving	-75		260		25		210	
		Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Capital Account	Saving		-75		260		25		210
	Gross fixed capital formation	0		210		0		210	
	Software (platform asset)			150				150	
	Software (database asset)			60				60	
Net lending(+)/borrowing(-)		-75		50		25		0	

Current Treatment: IPPs



	<u>Household</u>		<u>Intermediary</u>		<u>Advertiser</u>		<u>Total Economy</u>	
	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output			485		300		785
	Predictive ad services			275				275
	Software (platform asset)			150				150
	Software (database asset)			60				60
	Advertised product					300		300
	Intermediate consumption			0		275		275
	Predictive ad services					275		275
Value-added			485		25		510	
Use of Income Account	Disposable income			225		25		510
	Final consumption expenditure	300		0		0	300	
	Advertised product	300					300	
	Saving	-75		260		25	210	
Capital Account	Saving			-75		25		210
	Gross fixed capital formation	0		210		0	210	
	Software (platform asset)			150			150	
	Software (database asset)			60			60	
	Net lending(+)/borrowing(-)	-75		50		25		0

Current Treatment: Advertising Services



	<u>Household</u>		<u>Intermediary</u>		<u>Advertiser</u>		<u>Total Economy</u>	
	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output			485		300		785
	Predictive ad services			275				275
	Software (platform asset)			150				150
	Software (database asset)			60				60
	Advertised product					300		300
	Intermediate consumption		0			275		275
	Predictive ad services					275		275
Value-added		485			25		510	
Use of Income Account	Disposable income			225		25		510
	Final consumption expenditure	300		0		0	300	
	Advertised product	300					300	
	Saving	-75		260		25	210	
Capital Account	Saving			-75		25		210
	Gross fixed capital formation	0		210		0	210	
	Software (platform asset)			150			150	
	Software (database asset)			60			60	
	Net lending(+)/borrowing(-)	-75		50		25	0	

Current Treatment: Advertised Product



	<u>Household</u>		<u>Intermediary</u>		<u>Advertiser</u>		<u>Total Economy</u>		
	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources	
Production Account	Output			485		300		785	
	Predictive ad services			275				275	
	Software (platform asset)			150				150	
	Software (database asset)			60				60	
	Advertised product					300		300	
	Intermediate consumption		0			275		275	
	Predictive ad services					275		275	
Value-added		485			25		510		
Use of Income Account	Disposable income	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
	Final consumption expenditure	300		0		0		300	
	Advertised product	300						300	
	Saving	-75		260		25		210	
Capital Account	Saving	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	Gross fixed capital formation	0		210		0		210	
	Software (platform asset)			150				150	
	Software (database asset)			60				60	
	Net lending(+)/borrowing(-)	-75		50		25		0	

SNA Satellite Account



- Effort to make the role of the household more visible
- Intersection of “free” digital products and data is key
- Options
 - R&P costs for the data asset
 - OP-P costs for the data asset
 - “Free” digital products – GFCF included in sum of costs

SNA Satellite Account

- Scope of “free” digital products
 - Includes digital content that is provided to households without monetary charge for the full value in exchange for access to household observable phenomena that can be transformed into a data asset that can enrich the effectiveness of advertising messages or can be resold or otherwise used in production.
 - Typology in Heys and Taylor (2021)
- Household consumption of “free” products
 - Final consumption
 - Intermediate consumption in the production of OPs

Satellite Account: Baseline



		<u>Household</u>		<u>Intermediary</u>		<u>Advertiser</u>		<u>Total Economy</u>	
				Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output				485		300		785
	Predictive ad services				250				250
	"Free" products				25				25
	Software (platform asset)				150				150
	Software (database asset)				60				60
	Advertised product						275		275
	"Free" products						25		25
	Intermediate consumption			0			275		275
	Predictive ad services						250		250
	"Free" products						25		25
Value-added			485			25		510	
Use of Income Account		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
	Disposable income		225		260		25		510
	Final consumption expenditure	300		0		0		300	
	Advertised product	275						275	
	"Free" products	25						25	
Saving	-75		260		25		210		
Capital Account		Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	Saving		-75		260		25		210
	Gross fixed capital formation	0		210		0		210	
	Software (platform asset)			150				150	
	Software (database asset)			60				60	
Net lending(+)/borrowing(-)	-75		50		25		0		

Satellite Account: Baseline



	<u>Household</u>		<u>Intermediary</u>		<u>Advertiser</u>		<u>Total Economy</u>	
	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output			485		300		785
	Predictive ad services			250				250
	"Free" products			25				25
	Software (platform asset)			150				150
	Software (database asset)			60				60
	Advertised product					275		275
	"Free" products					25		25
	Intermediate consumption		0			275		275
	Predictive ad services					250		250
	"Free" products					25		25
Value-added		485			25		510	
Use of Income Account	Disposable income			225		25		510
	Final consumption expenditure	300		0		0	300	
	Advertised product	275					275	
	"Free" products	25					25	
	Saving	-75		260		25	210	
Capital Account	Saving			-75		25		210
	Gross fixed capital formation	0		210		0	210	
	Software (platform asset)			150			150	
	Software (database asset)			60			60	
	Net lending(+)/borrowing(-)	-75		50		25	0	

Satellite Account: Baseline



		<u>Household</u>		<u>Intermediary</u>		<u>Advertiser</u>		<u>Total Economy</u>	
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output		485				275		760
	Predictive ad services		250						250
	"Free" products		25						25
	Software (platform asset)		150						150
	Software (database asset)		60						60
	Advertised product						275		275
	"Free" products								0
	Intermediate consumption	0		250				250	
	Predictive ad services				250			250	
	"Free" products							0	
Value-added		485			25			510	
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Use of Income Account	Disposable income		225		260		25		510
	Final consumption expenditure	300		0		0		300	
	Advertised product	275						275	
	"Free" products	25						25	
Saving	-75		260		25		210		
		Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Capital Account	Saving		-75		260		25		210
	Gross fixed capital formation	0		210		0		210	
	Software (platform asset)			150				150	
	Software (database asset)			60				60	
Net lending(+)/borrowing(-)	-75		50		25		0		

Satellite Account: Baseline



	<u>Household</u>		<u>Intermediary</u>		<u>Advertiser</u>		<u>Total Economy</u>	
	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output			485		275		760
	Predictive ad services			250				250
	"Free" products			25				25
	Software (platform asset)			150				150
	Software (database asset)			60				60
	Advertised product					275		275
	"Free" products							0
	Intermediate consumption		0			250		250
	Predictive ad services					250		250
	"Free" products							0
Value-added		485			25		510	
Use of Income Account	Disposable income			225		25		510
	Final consumption expenditure	300		0		0	300	
	Advertised product	275					275	
	"Free" products	25					25	
	Saving	-75		260		25		210
Capital Account	Saving			-75		25		210
	Gross fixed capital formation	0		210		0	210	
	Software (platform asset)			150			150	
	Software (database asset)			60			60	
	Net lending(+)/borrowing(-)	-75		50		25		0

Satellite Account: Data Asset (R&P)



		<u>Household</u>		<u>Intermediary</u>		<u>Advertiser</u>		<u>Total Economy</u>	
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output		500.0				275.0		775.0
	Predictive ad services		250.0						250.0
	"Free" products		25.0						25.0
	Software (platform asset)			150.0					150.0
	Software (database asset)			60.0					60.0
	Software (data asset-R&P)								
	Software (data asset-OP-P)								
	Provision of OPs								0.0
	Advertised product						275.0		275.0
	Intermediate consumption			0.0		250.0		250.0	250.0
	Predictive ad services					250.0		250.0	250.0
	"Free" products							0.0	0.0
Provision of OPs							0.0	0.0	
Value-added			500.0			25.0		525.0	
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Secondary Income Account	Balance of primary incomes		225.0		275.0		25.0		525.0
	Imputed transfer of OPs								
Disposable income	225.0		275.0		25.0		525.0		
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Use of Income Account	Disposable income		225.0		275.0		25.0		525.0
	Final consumption expenditure	300.0		0.0		0.0		300.0	
	Advertised product	275.0						275.0	
	"Free" products	25.0						25.0	
Saving	-75.0		275.0		25.0		225.0		
		Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Capital Account	Saving		-75.0		275.0		25.0		225.0
	Gross fixed capital formation	0.0		225.0		0.0		225.0	
	Software (platform asset)			150.0				150.0	
	Software (database asset)			60.0				60.0	
	Software (data asset-R&P)			15.0				15.0	
	Software (data asset-OP-P)							0.0	
Net lending(+)/borrowing(-)	-75.0		50.0		25.0		0.0		

Satellite Account: Data Asset (OP-P)

	<u>Household</u>		<u>Intermediary</u>		<u>Advertiser</u>		<u>Total Economy</u>	
	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output			512.5		275.0		787.5
	Predictive ad services			250.0				250.0
	"Free" products			25.0				25.0
	Software (platform asset)			150.0				150.0
	Software (database asset)			60.0				60.0
	Software (data asset-R&P)			15.0				15.0
	Software (data asset-OP-P)			12.5				12.5
	Provision of OPs							0.0
	Advertised product					275.0		275.0
	Intermediate consumption		12.5	250.0		250.0		262.5
	Predictive ad services					250.0		250.0
"Free" products			12.5				12.5	
Provision of OPs							0.0	
Value-added		500.0			25.0		525.0	
Secondary Income Account	Balance of primary incomes			275.0		25.0		525.0
	Imputed transfer of OPs	12.5			12.5			12.5
	Disposable income	212.5		287.5		25.0		525.0
Use of Income Account	Disposable income		212.5		287.5		25.0	525.0
	Final consumption expenditure	287.5		0.0		0.0		287.5
	Advertised product	275.0						275.0
	"Free" products	12.5						12.5
	Saving	-75.0		287.5		25.0		237.5
Capital Account	Saving					25.0		237.5
	Gross fixed capital formation	0.0		237.5		0.0		237.5
	Software (platform asset)			150.0				150.0
	Software (database asset)			60.0				60.0
	Software (data asset-R&P)			15.0				15.0
	Software (data asset-OP-P)			12.5				12.5
Net lending(+)/borrowing(-)	-75.0		50.0		25.0		0.0	

Satellite Account: Data Asset (OP-P)



	<i>Household</i>		<i>Intermediary</i>		<i>Advertiser</i>		<i>Total Economy</i>	
	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output			512.5		275.0		787.5
	Predictive ad services			250.0				250.0
	"Free" products			25.0				25.0
	Software (platform asset)			150.0				150.0
	Software (database asset)			60.0				60.0
	Software (data asset-R&P)			15.0				15.0
	Software (data asset-OP-P)			12.5				12.5
	Provision of OPs							0.0
	Advertised product					275.0		275.0
	Intermediate consumption		12.5	250.0		250.0		262.5
	Predictive ad services			250.0				250.0
	"Free" products		12.5					12.5
Provision of OPs							0.0	
Value-added		500.0			25.0		525.0	
Secondary Income Account	Balance of primary incomes			275.0		25.0		525.0
	Imputed transfer of OPs	12.5		12.5			12.5	12.5
	Disposable income	212.5		287.5		25.0	525.0	
Use of Income Account	Disposable income			287.5		25.0		525.0
	Final consumption expenditure	287.5		0.0		0.0	287.5	
	Advertised product	275.0					275.0	
	"Free" products	12.5					12.5	
	Saving	-75.0		287.5		25.0	237.5	
Capital Account	Saving			287.5		25.0		237.5
	Gross fixed capital formation	0.0		237.5		0.0	237.5	
	Software (platform asset)			150.0			150.0	
	Software (database asset)			60.0			60.0	
	Software (data asset-R&P)			15.0			15.0	
	Software (data asset-OP-P)			12.5			12.5	
Net lending(+)/borrowing(-)	-75.0		50.0		25.0		0.0	

Satellite Account: Data Asset (OP-P)

	<i>Household</i>		<i>Intermediary</i>		<i>Advertiser</i>		<i>Total Economy</i>	
	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output			512.5		275.0		787.5
	Predictive ad services			250.0				250.0
	"Free" products			25.0				25.0
	Software (platform asset)			150.0				150.0
	Software (database asset)			60.0				60.0
	Software (data asset-R&P)			15.0				15.0
	Software (data asset-OP-P)			12.5				12.5
	Provision of OPs							0.0
	Advertised product					275.0		275.0
	Intermediate consumption	12.5				250.0		262.5
	Predictive ad services					250.0		250.0
	"Free" products			12.5				12.5
	Provision of OPs							0.0
Value-added			500.0		25.0		525.0	
Secondary Income Account	Balance of primary incomes			275.0		25.0		525.0
	Imputed transfer of OPs	12.5			12.5		12.5	12.5
	Disposable income	212.5		287.5		25.0	525.0	
Use of Income Account	Disposable income			287.5		25.0		525.0
	Final consumption expenditure	287.5		0.0		0.0	287.5	
	Advertised product	275.0					275.0	
	"Free" products	12.5					12.5	
	Saving	-75.0		287.5		25.0	237.5	
Capital Account	Saving					25.0		237.5
	Gross fixed capital formation	0.0		237.5		0.0	237.5	
	Software (platform asset)			150.0			150.0	
	Software (database asset)			60.0			60.0	
	Software (data asset-R&P)			15.0			15.0	
	Software (data asset-OP-P)			12.5			12.5	
Net lending(+)/borrowing(-)	-75.0		50.0		25.0		0.0	

Satellite Account: Outcomes



- Increased visibility of the household's role
 - Final consumer of some “free” products (but not all)
 - Imputed transfer of OPs for displaced final consumption
- Preserved current SNA scope for sum of costs
 - $SOC = \text{labor} + \text{capital} + \text{intermediate consumption}$
- Avoided double counting production
 - Output only increases by the value of the data asset
 - Value-added only increases by the value of the R&P costs
- Mitigated imputed transactions

Thank you!

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